TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 1, 2017

CERTIFIED MAIL

Ms. Stacey B. Dwyer, P.E., Associate Director
NPDES Permits and TMDLs Branch
Water Quality Protection Division
1445 Ross Avenue
Dallas, Texas 75202-2733

Re: Response to *Interim Objection of Draft Permit* for City of Dripping Springs TPDES Permit No. WQ0014488003 (*TX0136778)*

Dear Ms. Dwyer:

The Texas Commission on Environmental Quality (TCEQ) offers the following responses to EPA's letter dated December 1, 2016 regarding the draft permit package referenced above.

1. **Comment:** EPA cannot discern from the information provided what factors TCEQ considered in its determination of no significant degradation and whether the state's analysis complied with TCEQ's antidegradation policy and implementation procedures for Tier 2 reviews. Please provide additional information regarding the state's Tier 2 analysis in regard to the City of Dripping Springs discharge, including whether the state's analysis was subject to public review and comment.

   Response: Consistent with TCEQ policy and procedures, the preliminary antidegradation review of the discharge included technical reviews that included dissolved oxygen modeling (previously provided), dissolved solids screening, and a nutrient evaluation (enclosed). The draft permit includes limits that were derived from these analyses to ensure that no significant degradation of water quality in Onion Creek will occur. The Notice of Application and Preliminary Decision (public notice) concerning the proposed discharge and the Statement of Basis/Technical Summary for the draft permit included statements regarding the conclusions of the Tier 1 and Tier 2 antidegradation reviews performed by the TCEQ. These documents, as well as the draft permit, were made available to the public. The public notice provided the opportunity for the public to comment and submit additional information on receiving water uses, baseline water quality conditions, anticipated impacts of the discharge, and any other information relevant to the antidegradation review. The technical reviews that informed the preliminary antidegradation review conclusions are available to the public upon request. See response 3 for details regarding the consideration of additional information obtained during the comment period. The TCEQ will formally respond to all comments received during the comment period.

2. **Comment:** There is concern that the effluent limits proposed in the draft permit would contribute more than 450 pounds of phosphorus (P) per year in a phosphorus limited stream with a currently estimated annual load of approximately 1 pound of P annually and the proposed increase of Total Nitrogen (N) would be even more significant. Additional information is needed from the permittee/TCEQ that shows that these increases in Total P and Total N would not negatively impact the receiving waters. Additionally, Tier 1 antidegradation requirements state that surface waters must be maintained in an aesthetically attractive condition, and require that waste discharges not cause substantial and persistent changes from ambient conditions of turbidity or color. Please provide appropriate information showing that the draft permit will not cause or contribute excessive nutrients to the receiving waters that would violate the above listed requirements of a Tier 1 antidegradation review.

   Response: The nutrient screening procedures in the Procedures to Implement the Texas Surface Water Quality Standards (2010) (IPs) constitute the basis for the antidegradation review for nutrients. To assess the local effects of the proposed discharge under the narrative nutrient provisions of the Texas Surface Water Quality Standards, the TCEQ evaluated site-specific screening factors to assess eutrophication potential in Onion Creek. The following factors were considered and rated: size of discharge, instream dilution, stream substrate, stream depth, water clarity, presence of aquatic vegetation, shading, streamflow characteristics, presence of on-channel impoundments and pools, and consistency with other permits. The individual screening factors establish the basis for an overall "weight-of-evidence" assessment to identify the need for a nutrient effluent limit. An effluent limit for Total Phosphorus (TP) is typically indicated when a significant number of screening factors are rated in the moderate and high categories. In the case of the proposed discharge, the majority of factors ranked indicated a high potential for eutrophication. When an effluent limit for TP is indicated, then screening factors and levels of concern can also be considered in determining the specific concentration limit for TP. Initial assessments can be improved and reconsidered in light of additional site-specific data and/or more extensive evaluations. Typical effluent limits for TP, as a daily average concentration, generally fall into the 1.0 to 0.5 mg/L range. Per the Colorado River Watershed Rule (30 Texas Administrative Code (TAC) Chapter 311 Subchapter E) and Edwards Aquifer Rule (30 TAC Chapter 213), the proposed discharge would be required at a minimum to meet a limit of 1.0 mg/L TP. However, a more stringent nutrient limit was included due to the nutrient screening results. Conditions and limits included in the permit for the Hays County Water and Control Improvement District No. 1 wastewater treatment facility (WQ0014293001) were also referenced since the facility is similarly located within the Onion Creek watershed. In consideration of these factors, a total phosphorous daily average limit of 0.15 mg/L was included in the draft permit, consistent with the TP limit in the Hays County WCID No. 1 permit.

Additionally, the TCEQ offers the following responses to Mr. Greg Valentine's email dated January 31, 2017 which included comments based upon the U.S. Fish and Wildlife Service letter to EPA dated December 22, 2016.

3. **Comment:** How did you come to the conclusion that the discharge from the above referenced facility (TX0136778) would not further endanger the three federally listed, aquifer-dependent species (Austin blind salamander, Barton Springs salamander, and the Comal Springs dryopid beetle) which inhabit the subterranean water-filled conduits of this aquifer and the surface habitat at and near springs? Please provide all pertinent information in this decision making.

   Response: The discharge permit application went through a rigorous technical review process that involved dissolved oxygen modeling, a dissolved solids screening, and a nutrient screening to ensure that the draft permit, which includes recommended effluent limitations to meet Texas Surface Water Quality Standards and preclude significant degradation of the receiving waters, would be protective of surface water quality and aquatic life. If the EPA or USFWS have data or other specific information related to the water quality requirements of the three listed species, please provide it to the TCEQ for review.

4. **Comment:** How did you come to the conclusion that the discharge from the above referenced facility would not further degrade the designated critical habitat for these species and the underlying Edward's aquifer?

   Response: As mentioned in the previous response, the draft permit contains stringent effluent limitations to prevent the degradation of surface waters and protect aquatic life. If the EPA or USFWS have data or other specific information related to habitat sensitivities for the three listed species, please provide it to the TCEQ for review.

5. **Comment:** Has TCEQ looked into the effects of Onion Creek flowing towards Fern Bank Springs in the San Antonio Segment of the Edwards aquifer? If so, please provide any information obtained during this research. If not, please provide reasoning as to why not.

   Response: As mentioned in the previous responses, the draft permit contains stringent effluent limitations to prevent the degradation of surface waters and be protective of aquatic life. If the EPA or USFWS have data or other specific information related to habitat sensitivities or water quality requirements of the listed species, please provide it to the TCEQ for review.

6. **Comment:** Have the effects of the potential of having pharmaceuticals and personal use products in the effluent of the above referenced facility been reviewed/studied? If so, please provide all information obtained during this research/review. If not, please provide reasoning as to why not.

   Response: The TCEQ has not investigated the potential effects of Pharmaceuticals and Personal Care Products (PPCPs) in the effluent. The EPA has not promulgated rules or criteria limiting PPCPs in wastewater. We understand the EPA is researching PPCPs and has stated that scientists have not found clear evidence of adverse human health effects from PPCPs in the environment. However, the science on PPCPs is evolving, and while the EPA and other entities continue to study the subject, there is currently no clear regulatory regime available to address the treatment of PPCPs in domestic wastewater. PPCP removal during municipal wastewater treatment has been documented in scientific literature, but standard removal efficiencies have not been established. In addition, there are currently no federal effluent limit requirements for PPCPs. Accordingly, the TCEQ has not reviewed the proposed discharge for the presence of PPCPs and their potential effect on the aquatic environment.

7. **Comment:** Has TCEQ taken into account the U.S. Geological Survey's documented increased levels of nitrates in the Barton Segment from non-point sources (Mahler et al. 2011)?

   Response: The TCEQ is aware of increases in water body nutrient levels that can be associated with urban areas. The draft permit includes requirements that were derived from analyses that took into account the specific conditions and characteristics of the downstream receiving waters. Furthermore, in response to public comments, a total nitrogen (TN) limit of 6.0 mg/L has been added to the draft permit to minimize potential adverse impacts (from constituents such as nitrate) to local drinking water wells from this point source discharge.

8. **Comment:** Has TCEQ taken into account the significant percentage of Onion Creek channel flow loss into their estimated effect this discharge will have on the aquifer and the endangered species (listed above in Question 1) that depend on the subterranean water-filled conduits? If so, please explain.

   Response: The TCEQ is aware that a portion of flow from Onion Creek recharges the Barton Springs Segment of the Edwards Aquifer and, as stated previously, believes that the draft permit is protective of groundwater resources and surface waters downstream of the proposed discharge.

9. **Comment:** Has carefully planned land application disposal and/or moving the outfall to a less sensitive location been taken into consideration? If so, please provide all relevant information obtained during this review. If not, please explain why.

Response: The TCEQ's authority is limited to evaluation of the new permit application for discharge that was submitted by the City of Dripping Springs. The City is currently authorized to land-apply their treated wastewater and has stated that the purpose of the new permit application is to change its method of effluent disposal to accommodate growth in the Dripping Springs area. Additionally, the City states that it will pursue beneficial reuse authorization through 30 TAC Chapter 210 and that future reuse options could include direct potable reuse.

10. **Comment:** I seem to remember seeing somewhere, that during slow flow times the facility won't discharge to Walnut Springs Creek and then to Onion Creek, but will rather discharge to subsurface irrigation, as is/has been the practice at this location. I can't find this language, could you please provide it, or correct me if I am incorrect on this? Also, what is the definition of low flow times? What is the threshold where effluent will be discharged to the Creeks instead of subsurfacely?

    Response: The TCEQ could not locate the referenced language.

11. **Comment:** If I was correct on Number 8, above, what percentage of time will the discharge be via the outfall to the Creeks? To subsurface irrigation?

    Response: NA

Public comments and additional information: Based upon TCEQ's initial review of public comments and information received during the comment period, additional requirements are being added to the draft permit. A total nitrogen (TN) limit of 6.0 mg/L has been added to the draft permit for all three effluent flow phases to minimize potential adverse impacts to local drinking water wells. In response to comments expressing concerns that chlorine in the discharge would negatively affect aquatic life downstream of the discharge, dechlorination requirements have been added to the draft permit in all flow phases. A detailed response to all comments (RTC) document will be provided to all commenters and interested parties following resolution of EPA's Interim Objection.

Revised copies of the draft permit and technical summary are enclosed with this letter. We hope this resolves the outstanding interim objection and EPA will issue an approval letter allowing this permit to be issued. If you have any questions, please feel free to contact me at (512) 239-4515 or chris.linendoll@tceq.texas.gov.

Sincerely,

Chris Linendoll, E.I.T., Manager
Wastewater Permitting Section
Water Quality Division
Texas Commission on Environmental Quality

Enclosures